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10/567,128	06/28/2006	Luciano Leite Furuti	21517/0203953-US0	8864
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EXAMINER				
RUBBY, TRAVIS C				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/567,128

**Applicant(s)**

FURUT I ET AL.

**Examiner**

TRAVIS RUBY

**Art Unit**

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 6/28/2006  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. The disclosure is objected to because of the following informalities:
3. Page 14 of the Specification is a duplicate of Page 13 of the Specification and should therefore be deleted.
4. Page 6 line 18 “decoder 40” should be changed to --decoder 50-- to reflect the proper labeling of the drawings.
5. Page 9 line 32 “processing unit 70” should be changed to --processing unit 60-- to reflect the proper labeling of the drawings.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2, 9, 11, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites “which it has been” in line 12. It is unclear as to what structure “it” is referring to and renders the claim indefinite.
9. Claim 1 recites “in that it further comprises” in line 14. It is unclear as to what structure “it” is referring to and renders the claim indefinite.
10. Claims 2 and 11 are unclear as they only contain method features but refer to a product claim.
11. Claims 9 and 13 recite an “electromagnetic obturator”. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “obturator” in claims 9 and 13 is used by the claim to mean “actuator”, while the accepted meaning is “one (as a prosthetic device) that closes or blocks up an opening (as a fissure in the palate) typically used in medical devices” The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kano (US5662465, as cited by applicant).

Kano teaches:

**Re Claim 1.** A control system for the operation of a kitchen oven of the type which comprises:

a cooking chamber (ref 44) lodging a heat source (ref 46, 48) and a temperature sensor (ref 38) (Figure 1, Column 2 lines 45-58); and

a thermostatic control device (Figures 7-9) external to the cooking chamber and which is operatively associated with an energy source (ref 17,18), with the heat source, with the temperature sensor (ref 38) and with a scale of the oven operating temperatures (Figures 1-3, Column 2 lines 50-67; Column 3 lines 10-50 teach the scale of operating temperatures of the oven), *in order to control the energy supplied to the heat source as a function of the operating temperature to which the heat source has been selectively adjusted and of the temperature sensed by the temperature sensor,*

characterized in that the thermostatic control device further comprises a decoder (ref 14) which is operatively associated with the thermostatic control device (Figures 1-3, Column 2 lines 50-67; Column 3 lines 10-50 teach the scale of operating temperatures of the oven, Column 4 lines 16-34), *in order to produce a digital signal for each temperature of the scale which has been set in the thermostatic control device;* and

an electronic control module (12) energized by an electric energy source, and comprising: a processing unit (ref 20), an initial heating timer (time t), a digital display (ref 28), and an audible alarm (ref 26) operatively associated with each other, said processing unit being

connected to the decoder (Column 2 lines 33-50; Column 5 lines 17-32 teach a timer) *so as to receive therefrom and to process a digital signal indicative of the activation of the oven and of the operating temperature selected in the thermostatic control device, in order to activate the audible alarm when a pre-established initial heating time has elapsed, so that the cooking chamber reaches the selected operating temperature.*

Annotation: The functional features indicated in italic characters do not represent limiting features as this claim is a product claim and not a method claim (The same designation will be used throughout the Office Action).

**Re Claim 2.** The system as set forth in claim 1, characterized in that the digital display *indicates the selected operating temperature, when the initial heating time determined by the processing unit has elapsed* (Column 2 lines 42-44, It is noted that this claim is merely a functional recitation of the display device and not a structural limitation as is required by a product claim, see 112 rejection above).

**Re Claim 3.** The system as set forth in claim 1, characterized in that the thermostatic control device comprises a driving rod (ref 16 in Figure 9) to which is affixed a knob (ref 210 in Figure 9) to be operated by the user in association with the scale of the oven operating temperatures (Column 4 lines 5-15),

the decoder being operatively associated with the driving rod to sense the displacement of the knob along the scale and to produce a digital signal indicative of said displacement (Column 3 lines 10-34, Column 4 lines 5-35).

**Re Claim 4.** The system as set forth in claim 3, characterized in that the driving rod and the knob are rotatably displaced along the scale of the oven operating temperatures (Column 4 lines 5-35).

**Re Claim 7.** The system as set forth in claim 1, characterized in that the electronic control module still comprises a timer operatively associated with the processing unit, the digital display, and the audible alarm, *so as to indicate in the digital display the time elapsed to be controlled by the user, and to make the audible alarm ring when the time preset in the timer has elapsed* (Column 2 lines 42-44 teach the display can indicate various functions of the oven, Column 5 lines 17-32 teach a timer).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kano (US5662465, as cited by applicant) in view of Marcantonio (US4450552).

**Re Claim 5.** Kano teaches a decoder for determining the position of a rotatable shaft but fails to specifically teach that the decoder is of the type which uses the Gray Codification to

produce the digital signals corresponding to the different adjustments for the operating temperature of the cooking chamber which are obtained in the respective rotation positions of the knob-driving rod assembly. Marcantonio teaches a digital potentiometer that uses Gray Code (Column 2 lines 1-20). It would have been obvious to one of ordinary skill in the art at the time of invention to include Gray Code with Kano's potentiometer since it is well known that Gray Code allows for greater sensitivity, accuracy, and precision with rotatable potentiometers (Marcantonio Column 2 lines 18-20).

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kano (US5662465, as cited by applicant) in view of Bosch (EP1215441A2, as cited by applicant).

**Re Claim 6.** Kano teaches a temperature sensor (ref 38) inside a cooking chamber (Column 2 lines 45-46) but fails to specifically teach a sensor bulb directly coupled to the thermostatic control device, *so as to operate the latter as a function of the temperature condition sensed inside the cooking chamber*. Bosch teaches a thermocouple (ref 50) that is directly coupled to a thermostatic control device (ref 30) (Paragraph 18, Figure 1). It would have been obvious to one of ordinary skill in the art at the time of invention to have the temperature sensor directly connected to the thermostatic control device since it allows for precise and accurate temperature regulation of the heat source. In addition it would have been obvious to one of ordinary skill in the art to use a sensor bulb in place of a thermocouple or thermistor since it is an art recognized equivalent and the selection of any of these known equivalents to a temperature sensor would be within the level of ordinary skill in the art.



17. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano (US5662465, as cited by applicant) in view of Graff (US2003/0116557A1, as cited by applicant).

**Re Claim 8.** Kano teaches an electronic control module with a display and alarm but fails to teach an operation timer which is operatively associated with the processing unit, with the digital display, with the audible alarm and with the thermostatic control device *in order to indicate, in the digital display, the count of an operational time of the heat source set by the user, making the audible alarm ring and interrupting the energization of the heat source upon completion of the time selectively adjusted in the operation timer.* Graff teaches an operation timer (ref 24, 26, Figure 1) that is connected to a digital display and thermostatic control (Paragraph 31, 43). In view of Graff's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to include an operation timer to the oven control since it allows for precise temperature control and cooking time of the oven. It is also well known in the arts to use a timer to control a kitchen oven.

**Re Claim 9.** Kano teaches the heat source is defined by a gas burner (Column 2 lines 50-55),

the thermostatic control device being defined by a thermostatic valve (ref 52) incorporating an electromagnetic obturator (ref 54) (Column 2 lines 54-58),

the system further comprising a thermocouple (ref 38) associated with the heat source (ref 46) and which is electrically connected to the electromagnetic obturator by a normally closed

electronic switch (ref 24) provided in the electronic control module and which is connected to the processing unit (ref 20) to be opened, *interrupting the energization of the electromagnetic obturator and blocking the supply of gas to the heat source, upon completion of the time selectively adjusted by the user in the operation timer.*(Column 2 lines 40-50).

**Re Claim 10.** Kano teaches that the electronic switch is a relay (Column 2 lines 54-58) but fails to specifically teach that it is normally closed. It would have been obvious to one of ordinary skill in the art at the time of invention to make the relay a closed relay since it is well known in the arts for gas valves to be normally closed for safety reasons.

**Re Claim 11.** Kano teaches that *the initial heating time for the cooking chamber is defined by the processing unit as a function of the time elapsed since the last switching-off of the oven in the thermostatic control device and measured by the operation timer* (Column 2 lines 42-44 teach the display can indicate various functions of the oven, Column 5 lines 17-32 teach a timer).

18. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano (US5662465, as cited by applicant) in view of Witham et al (US5575638, as cited by applicant).

**Re Claim 12.** Kano teaches an additional heat source (ref 48) but fails to specifically teach an additional operation timer and that the second heat source is defined in a cook top associated with the oven said additional operation timer *indicating, in the digital display, the*

*count of the operating time of the additional heat source preset by the user, making the audible alarm ring, and interrupting the energization of the additional heat source upon completion of the time selectively adjusted in the additional operation timer.* Witham et al teaches a cook top gas burner (ref 17) with an operation timer (ref 42) connected to a thermostatic control device (ref 32) (Column 3 lines 20-42).

**Re Claim 13.** Kano teaches the additional heat source is a gas burner (Column 2 lines 50-55) and the control device is a valve (ref 60) incorporating an electromagnetic obturator (ref 62) (Column 2 lines 58-63), said system further comprising a thermocouple associated with the additional heat source and which is electrically connected to the electromagnetic obturator by a normally closed additional electronic switch (ref 22) provided in the electronic control module and which is connected to the processing unit (ref 20) to be opened, *interrupting the energization of the electromagnetic obturator and blocking the supply of gas to the additional heat source, upon completion of the time selectively preset by the user in the additional operation timer* (Column 2 lines 40-50).

**Re Claim 14.** Kano teaches that the electronic switch is a relay (Column 2 lines 54-58) but fails to specifically teach that it is normally closed. It would have been obvious to one of ordinary skill in the art at the time of invention to make the relay a closed relay since it is well known in the arts for gas valves to be normally closed for safety reasons.

***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS RUBY whose telephone number is (571)270-5760. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 or 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Travis Ruby/  
Examiner, Art Unit 3744

/Frantz F. Jules/  
Supervisory Patent Examiner, Art Unit 3744